**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Activity 6.1**

***NEED: calculator, partner***

**1)** Find a partner. Decide who will be the subject and who will be the experimenter first. (You will switch later)

Subject = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Experimenter = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2)** The subject should turn to their recording sheet (second page). The experimenter should get out their calculator.

**3)** The basic idea of the experiment is this: The experimenter will be randomly generating numbers 1 thru 4. The experiment is to see if the subject has ESP, and can guess what number was generated!

**4)**  Now complete the experiment:

- The experimenter will (on their calculator) go to the MATH button, then over to PRB, then to #5: randInt(), then hit ENTER so that randInt( comes up on your main screen. Type in (1, 4) and WAIT. DON’T HIT ENTER.

- The subject should go to **their** recording sheet, and write down their guess for the first number (1, 2, 3, or 4)

- The experimenter should then hit ENTER on their calculator, so the calculator generates a number (1, 2, 3, or 4).

- The experimenter should then tell the subject the number

- The subject should record a “Y” (for YES) if they guessed the number correctly, and a “N” (for NO) if they guessed wrong.

- Repeat the process (guess, then generate a number on the calculator, then mark if correct or incorrect) until the recording sheet is full

**5)**  Switch subject and experimenter, and complete step #4 for the other person.

Subject = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Experimenter = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6)**  FOR THE DATA, answer the following:

**-** What was your longest string of CORRECT guesses? \_\_\_\_\_\_\_\_\_\_\_\_\_

- What was your longest string of WRONG guesses? \_\_\_\_\_\_\_\_\_\_\_\_\_

- What is the percent of times **YOU** guessed **correctly**? (# correct /20) \_\_\_\_\_\_\_\_\_\_\_\_\_

- What is the percent of times your partner guessed **correctly**? (# correct/20) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Add **your** results to the class data on the front board (your partner will add their results)

- Now create a dotplot of the class results below:

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

**9)** **Describe** the class dotplot (shape, center, spread, any outliers or other unusual things). Did any members appear to have ESP? Why or why not?

**10)** Calculate the average percent of correct identifications for the class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**11)** What would you expect the proportion to be if the subjects were just guessing? \_\_\_\_\_\_\_\_\_\_

*Meaning that they had no ESP ability*

**12)** How does the class average compare with the expected guessing proportion?

**13)**  What were some sources of bias/error in this experiment?

***RECORDING SHEET:***

|  |  |  |
| --- | --- | --- |
| **Trial #** | **GUESS** | **Correct Guess (Y) or Wrong Guess (N)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |
| 13 |  |  |
| 14 |  |  |
| 15 |  |  |
| 16 |  |  |
| 17 |  |  |
| 18 |  |  |
| 19 |  |  |
| 20 |  |  |